

REMARKS

By the present Amendment, claims 20-21 are added. This leaves claims 8-21 pending in the application, with claims 8 and 14 being independent.

Claims 8, 9, 12-15 and 18-21 are generic to all three species. Claims 10 and 16 read on the elected species, as well as species 3 (Figs. 4 and 4a). Claims 11 and 17 read on the elected species. Thus, all pending claims read on the elected species.

Rejections Under 35 U.S.C. § 103

Amended claim 8 covers a method of filtering fluids comprising supplying unfiltered material through an input 22 to a plurality of stacked frame parts 16 and discharging filtrate through an output 24 arranged in sets thereof. The frame parts are filtrate plates 26 and filter frames 28 with the filter frames bordering on filter spaces 30. Filtrate cakes are formed in the filter spaces. Each filter space is sealed on its side facing the next filter frame part by a first laminar filter 32 and on an opposite side by a second filter medium 34. A washing fluid is fed sequentially through each set of the filter mediums, the filter cakes and the laminar filters in that order. The washing fluid is then conveyed from the laminar filters to the output.

Claim 14 covers a device for filtering fluids comprising an input 22 for supplying unfiltered material, an output 24 for discharging filtrate and a plurality of stackable frame parts 16 including filtrate plates 26 and filter frames 28 arranged in sets thereof between the input and output. Each filter frame borders on a filtrate space 30 for accommodating and forming a filter cake. First laminar filters 32 are mounted on the respective frame parts, face others of the frame parts and seal the filtrate spaces. Second filter mediums 34 border the filtrate spaces on its sides opposite the first

laminar filters. Channel means conveys a washing fluid sequentially each set of the second filter mediums, the filter spaces and the first laminar filters in that order, and then out the output.

By forming the method and forming the device in these manners, the washing fluid can be used in a subsequent filtration process. Specifically, the washing fluid, relative to each filtrate space or set first passes through the respective filter medium, then through the filter cake in that filter space, and then through the respective laminar filter in that order before being conveyed from the laminar filter to the output. This washing fluid procedure provides an additional filter mechanism for removing by back washing valuable substances entrapped within the filter cake in a filtered manner, since the back washing fluid must pass through the first laminar filter before passing to the output, a step or means not disclosed or rendered obvious by the cited patent.

Claims 1-18 (apparently intended to be claims 8-19) stand rejected under 35 U.S.C. §102 as being anticipated by or under 35 U.S.C. §103 obvious over U.S. Patent No. 5,362,387 to Saito. The rejection merely states that all of the limitations of the claims are met by the Saito patent or are obvious in view of what is known in the art. The International Preliminary Examination Report is alleged to express the same opinion, although such report does not cite or refer to the Saito patent.

The Saito patent relates to a beer filtering device having filter plates 4 and filter frames 6 arranged side by side and alternating. Fig. 4 illustrates the filtering operation, while Figs. 5 and 6 illustrate the washing operation (column 8, lines 4-7). The washer liquid flows from line 70 in parallel through the spaces among the filter plates 4, filter elements 28 and filter frames 6 to discharge line 71 (column 8, lines 10-15). This parallel flow does not provide a sequential flow

from one filter element 28, then through the filtrate chamber in filter frame 6 and then through the other filter elements 28, with the filtrate chamber being between those to filter elements.

In contrast, the washing step recited in claim 8 and the channel means for conveying a washing fluid of claim 14 require a sequential passage for each filtrate chamber through the filter medium, then through the filter cake or filtrate chamber, and then through the laminar filter, before being conveyed to the output. In this manner, the washing process performed or capable of being performed provides an additional filtering such that remaining valuable substances in the filter cake can be removed, as described in this application. Particularly, in the biotechnology field, the present claimed invention can be used to retrieve fine and expensive substances, such as proteins substances, albumin, globuline, etc. for which the process and device disclosed in the cited International application are incapable. Accordingly, the specific feeding of the washing fluid in a sequential manner recited in claim 8 and the channel means providing the sequential conveying of the washing fluid recited in claim 14 are not disclosed or rendered obvious by the subject matter of the International application. None of the other cited patents cure these deficiencies in the International application.

Claims 9-13 and 20-21 and claims 15-19, being dependent on claims 8 and 14, respectively, are also allowable for the above reasons advanced. Moreover, these dependent claims are further distinguished by the additional limitations recited therein. Specifically, the deep-bed filter mediums and filter cloths of claims 9 and 15, the compressive forces and compression means of claims 10 and 16, the membrane pressurized by a gas or liquid of claims 11 and 17, the clamping of the laminar filter and the filter medium and the channels in the plates of claims 12 and 18, and the channels and channel means of claims 13 and 19, are not anticipated or rendered obvious by the

International application, particularly within the overall claimed combination. No specific comments are provided relative to the features of these dependent claims.

New dependent claims 20 and 21 are further distinguished by the method filtering a blood plasma fluid for blood-plasma fractionation of fine particles (claim 20), with the fine particles being albumin, globulin or protein substances (claim 21). Filtering of such material is not disclosed or rendered obvious by the cited patents, particularly by the claimed method.

In view of the foregoing, claims 8-21 are allowable. Prompt and favorable action is solicited.

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Information Disclosure Statement

Applicant requests the U.S. Patent No. 4,722,789 to Kupka, listed on the attached form and cited recently in a corresponding EPO patent application, be made officially of record in this application. Similar to the Saito patent, the washing fluid goes through filtrate chamber, and then through the filters on each side thereof. The sequential flow of the claimed method and device is not anticipated or rendered obvious.

Respectfully submitted,



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